No. 8200106

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

N.F. Davis, Drier & Elevator, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF eighteen YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, [illegible] EXPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. [illegible] UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS [illegible] CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS [illegible] THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

RICE

'California Belle'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington this 28th day of October in the year of our Lord one thousand nine hundred and eighty-two.

Attest:

Kenneth H. Evans
Acting
Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

John R Block
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK. MEAT, GRAIN &SEED DIVISION

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

FORM APPROVED: OMB NO. 0581.0005

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1. NAME OF APPLICANT(S)
N. F. Davis Drier & Elevator, Inc.

2. TEMPORARY DESIGNATION
NFD-69

3. VARIETY NAME
California Belle

4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code)
P. O. Box 425
Firebaugh, California 93622

5. PHONE (Include area code)
(209) 659-3035

FOR OFFICIAL USE ONLY

PVPO NUMBER
8200106

6. GENUS AND SPECIES NAME
Oryza sativa L.

7. FAMILY NAME (Botanical)
Gramineae

FILING DATE
4/15/82
TIME
11 ☐ A.M. ☐ P.M.

8. KIND NAME
Rice

9. DATE OF DETERMINATION
August, 1979

FEES RECEIVED
AMOUNT FOR FILING
$ 500.00
DATE
4/15/82
AMOUNT FOR CERTIFICATE
$ 250.00
DATE
10/8/82

10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.)
Corporation

11. IF INCORPORATED, GIVE STATE OF INCORPORATION
California

12. DATE OF INCORPORATION
1948

13. NAME AND ADDRESS OF APPLICANT REPRESENATIVE(S), IF ANY. TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS
Veronica Colby Devitt
LIMBACH, LIMBACH & SUTTON
2001 Ferry Building
San Francisco, California 94111
Telephone: (415) 433-4150

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED

a. [X] Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)

b. ☐ Exhibit B, Novelty Statement

c. [X] Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)

d. ☐ Exhibit D, Additional Description of the Variety

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act.)
[X] Yes (If "Yes," answer items 16 and 17 below) ☐ No

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☐ Yes [X] No

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
☐ Foundation ☐ Registered ☐ Certified

18. DID THE APPLICANT(S) FILE FOR PROTECTION OF TWE VARIETY IN THE U.S. OR OTHER COUNTRIES?
United States Serial No. 8100094, now abandoned
Filed April 7, 1981
[X] Yes (If "Yes," give names of countries and dates)
☐ No

19. HAVE RIGHTS BEEN GRANTED IN THE U.S. OR OTHER COUNTRIES?
☐ Yes (If "Yes," give names of countries and dates)
[X] No

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undetsigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT
DATE April 5, 1982

SIGNATURE OF APPLICANT
DATE

FORM LMGS-470 (9-81) (Edition of 1-78 is obsolete)

INSTRUCTIONS

General: Send an original copy of the application and exhibits, at least 2,500 viable seeds, and $500 fee ($250 *filing fee and $250 examination fee)* to U.S. Department of Agriculture, Agricultural Marketing Service, Livestock, Meat, Grain and Seed Division, Plant Variety Protection Office, National Agricultural Library Building, Beltsville, Maryland 20705. *(Seesection 180.175 of the Regulations and* Rules *of Practice.)* Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

Item

9 Give the date the applicant determined that he had a new variety based on (1) the definition in section 41 (a) of the Act and (2) the date a decision was made to increase the seed.

14a Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4) evidence of uniformity and stability.

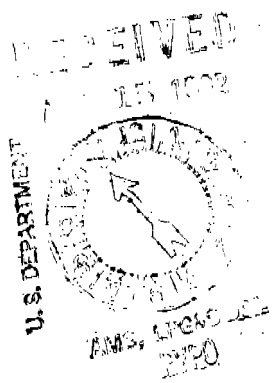
14b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties: (1) identify these varieties and state all differences objectively; (2) attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.

14c Fill in the Exhibit C, Objective Description form, for all characteristics for which you have adequate data.

14d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.

15 If "Yes" is specified *(seed of this variety be sold by variety name only as a class of certified seed)* the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled, his decision published, or the certificate has been issued. However, if the applicant specified "No," he may change *his* choice. *(See section 180.16 of the Regulations and Rules of Practice.)*

16 See section 42 of the Plant Variety Protection Act and section 180.7 of the Regulations and Rules of Practice.



8200106

BREEDING HISTORY OF CALIFORNIA BELLE LONG GRAIN RICE

California Belle is a long grain rice (Oryza sativa L.) developed in the rice breeding laboratory of the N. F. Davis Drier & Elevator, Firebaugh, California, by Dr. Paul C. H. Hu. This rice, California Belle, was a hybrid cross made in 1976. Bluebelle was used as a male parent to cross with 72/3764 (CI 11032), a rice germplasm released by the California Co-operative Rice Research Foundation, Inc. F_1 (first generation 1972) plants were grown in the greenhouse of the N. F. Davis Ranch in Firebaugh, California, during the winter of 1976. F_2 (1977) and F_3 (1978) population were planted and harvested during the cropping seasons of 1977 and 1978, respectively. One particular plant, with fine grain appearance and exceptionally good seed set, was selected for succeeding generations and to increase seeds at the winter nursery in the Hawaiian Islands in 1978. Despite unfavorable weather conditions, this particular line, California Belle (F_4 generation), showed very well, with a full seed set without blank spikelets. This (F_4) planting started to show uniformity in the heading, maturity, and plant type with very little segregation appearing. A selection of 15 panicles was made, and all the seeds were brought back to Firebaugh, A preliminary yield trial showed California Belle F_5 (1979). : population to be similar to Earlirose in maturity and yield. The results of the trial are as follows (seeded June 11, 1979):

EXHIBIT A

	Days to 50% heading	Plant height (cm)	Grain Yield (cwt/ac)	Lodging %
California Belle	81	104	108	10
Earlirose	82	118	108	100
Earlirose 76	85	116	101	60
M-101	85	89	100	80
M-301	85	95	93	15

In addition to the above test, both pedigree lines (F_5 1979) and bulk population seeds were multiplicated. Four samples of F_6 (1980 generation) milled rice were sent to the Regional Rice Quality Laboratory at Beaumont, Texas, for quality survey. Chemical analysis showed all four lines to be adapted to typical U.S. long grain standards. Data was as follows:

	amylose content %	alkali 1.7%	spread 1.5%	gelatinization temperature	cooking quality based on amylose and alkali value
California Belle A	22.7	5.0	3.0	intermediate	typical
California Belle B	22.6	5.0	3.4	intermediate	typical
California Belle C	22.5	5.2	3.9	intermediate	typical
California Belle D	23.0	5.1	4.0	intermediate	typical
Texas Labelle	24.0	4.0	3.5	intermediate	typical
L-201*	22.0-24.7	4.0-6.0		intermediate-low	

* cited Tseng, S.T., et al (1979) Crop Sci. 19:745

According to Dr. C. N. Bollich of the Rice Quality Laboratory in Texas, a rice variety grown in a California environment would have 1% to 2% more apparent amylose content than the same variety grown in Texas. A cooking and tasting test conducted at the laboratory of Rice Growers Association, Sacramento, California, revealed that California Belle (F_6 population) is very close to U.S. southern long grain in taste and texture and is much superior to L-201.

Adaptability of California Belle lines was found to be superior to that of L-201 as well as M-9. A randomized complete block design with 22 entries and 4 replications was used. Although comparisons were made on small plots (4' x 8' = 32 square feet base), general yielding data of the different varieties was obtained. This experiment was carried on in four different latitudes in the rice districts of California. These area projects varied in temperature, water quality and field management. Cali'fornia Belle lines were found to be photo-period insensitive, and heading was accelerated by temperature. L-201 and M-9 were partly immature following mid-June plantings because their longer growth duration exposed them to low fall temperatures, which resulted in slow maturation.

The grain yield (cwt./ac.) of the four different rice area projects was as follows:

	Merced *Apr.16	Stockton *May 7	Gridley *May 8	Firebaugh *May 15	Average cwt/ac	Duncan's test LSD .05=7 cwt/ac
California Belle C	79 cwt.	99 cwt.	104 cwt.	143 cwt.	106	A
California Belle A	62 cwt.	99 cwt.	100 cwt.	15'1 cwt.	103	A B
M-9	60 cwt.	93 cwt.	111 cwt.	139 cwt.	101	A B
L-201	78 cwt.	108 cwt.	66 cwt.	144 cwt.	99	A B
California Belle B	63 cwt.	94 cwt.	102 cwt.	136 cwt.	99	A B
M-103,	59 cwt.	99 cwt.	89 cwt.	135 cwt.	9 6	B

*Seeding dates

From the viewpoint of statistical analysis on grain yields over the four different locations, California Belle, L-201 and M-9 apparently belong to the same homogeneous group. However, L-201 was reported susceptible to herbicides Ordram(1) and Bolero(2). Lower yield figures for the variety L-201 in the Gridley area substantiated this, as Ordram had been used for weed control. California Belle line showed no such herbicide damage.

A more comprehensive yield trial was conducted in Firebaugh using the same type of plots (4' x 8' = 32 square feet) with 4 replications at ramdom, and the grain yields from different planting dates are as follows:

---

(1) Characteristics of Publicly-Developed Rice Varieties - 1980. (Prepared by the California Co-operative Rich Research Foundation, Inc., and the University of California Agricultural Extension Service)

(2) Hu, C. H. Unpublished data

	Days to 50% heading			Grain Yields (cwt/acre)				Duncan's test
	*Apr. 15	May 15	June 15	Apr. 15	May 15	June 15	Average	LSD .05-7.5 cwt/ac
California Belle A	105	85	79	140	151	119	136	A
California Belle B	101	86	79	136	136	125	132	A B
L-201	113	99	86	153	144	98**	131	A B C
California Belle C	102	86	82	132	143	111	129	B C
M-101	102	82	75	134	135	115	128	B C
M-9	106	93	81	138	139	93**	123	C

*Seeding dates
**Some grains were immature at harvest time

Regarding the agronomic characteristics of California Belle, this variety has excellent seedling vigor where water management is maintained at a depth of 2 to 4 inches.. California Belle is of intermediate plant height (42 to 45 inches) and is resistant to lodging at harvest time. With the exsertion of the panicle completed, -ripening of the grain was synchronized, and the variety California Belle showed to be more shatter-resistant than the L-201. Harvest index shows grain weight to be greater than straw weight. Lines A and C will be combined for further foundation rice 'seed multiplication.

There were three sister lines of California Belle which were tested in four different locations with three different planting dates. Each line had stable characteristics. The chemical analysis on amylose content was the same on each. Through three

generations the tasting and cooking qualities of the varieties have been consistent.

See enclosed two photographs, one showing plant type and one showing grain characteristics.

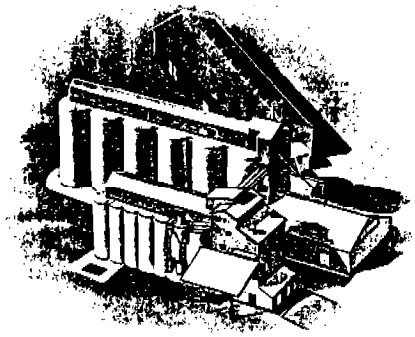
NOVELTY STATEMENT

California Belle is a long-grain rice, but it is similar to Earlirose in maturity and yield.

California Belle most closely resembles Bluebelle, but it has much higher production than Bluebelle when grown in California, producing spikelets in excess of 90% fertility, as opposed to approximately 60% fertility for Bluebelle when grown in California under comparable conditions. In paddy form California Belle has a color more like straw than the golden brown of Bluebelle, and its panicles are more or less intermediate type compared to the compact panicles of Bluebelle.

California Belle matures about ten days earlier than L-201, has a well-exserted panicle, and the grains in panicle had synchronized maturity. It differs from L-201 in that it is resistant to Ordram and Bolero herbicides.

When cooked, California Belle differs from Kokubelle in that it does not have a japonica-type taste and is not sticky in texture. Also, the individual kernels tend to maintain their identities in the cooking process, rather than dissolving together. It matures three to ten days earlier than Kokubelle and grows somewhat taller.



N. F. Davis Drier & Elevator, Inc.

DIVERSIFIED FARMING; CERTIFIED RICE & CEREAL SEED PROCESSING
P. O. BOX 425 • FIREBAUGH, CALIFORNIA 93622 *TELEPHONE 209 659-3035

May 7, 1982

Limbach, Limbach & Sutton
2001 Ferry Building
San Francisco, California 94111

Dear Ms. Devitt:

Re: California Belle (Your File DAV-0200)

In reply to your letter of May 4th:

All agronomic characteristics of California Belle are stable. In other words, no more segregation was found in this variety.

The differences between California Belle and Bluebell were as follows when these two cultivars were grown in California and seeded at the same time, i.e. May 1, 1981:-

	California Belle	Bluebell
Days to 50% heading:	97	115
Spikelet fertilization:	~~highly fertile~~ ~~semi-sterile~~	Semi-Sterile 8/31/82 ~~highly fertile~~
Color of hull (glumes):	Straw ~~golden~~ 8/16/82	~~straw~~ Golden
Culm angle:	intermediate	erect

The reference in the novelty statement to the resemblance between California Belle and Bluebell was in regard to the "milled rice" shape and the cooked rice taste,

Please let us know if there is any further information needed.

Sincerely,

N. F. DAVIS DRIER & ELEVATOR

N. F. Davis

9

GRAIN FERTILIZATION, 1980. PLOT TESTS

Seeded:	Firebaugh May 15	Merced Apr. 16	Stockton May 7	Gridley May 8	Average LSD.05 = 4.5%
NFD-69A	86.4%	92.3%	88.8%	90.9%	89.6%
NFD-62C	90.5%	90.9%	92.9%	92.4%	91.7%
M-101	88.5%	89.9%	91.6%	87.2%	89.3%
MS	83.9%	91.0%	93.2%	92.4%	90.1%
L-20 1	74.0%	89.6%	88.6%	87.4%	84.9%
E.R.76	90.0%	91.4%	90.4%	95.7%	91.9%

Bluebell 67.9% (Seeded May 1, 1981) Head row

FORM APPROVED. OMB NO. 40-R3712

FORM GR-470-17 (I-2-73)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
HYATTSVILLE, MARYLAND 20762

EXHIBIT C (Rice)

OBJECTIVE DESCRIPTION OF VARIETY

RICE *(ORYZA SATIVA)*

REFERENCES: See Reverse.

NAME OF APPLICANT(S)
N. F. Davis

ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)*
P. O. Box 425
Firebaugh, California 93622

FOR OFFICIAL USE ONLY

PVPO NUMBER
8200106

VARIETY NAME OR TEMPORARY DESIGNATION
California Belle

Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in first box (e.g. [0][9] or 0 9) when number is either 79 or less or 9 or less.

1. MATURITY (Seeding to 50% Heading):

LOCATION Firebaugh, CA AVERAGE DATE SEEDED May 15

a 2 Season: 1 = VERY EARLY (85 days or less) 2 = EARLY (86 - 100) 3 = MIDSEASON (101 - 115) 4 = LATE (115 or more) — 0 8 6 NUMBER OF DAYS

1 5 NO. OF DAYS EARLIER THAN.. 5

NO. OF DAYS LATER THAN..

1 = BELLE PATNA 2 = BLUEBELLE 3 = NATO 4 = STARBONNET 5 = CALROSE 6 = REXORO

2. PLANT HABIT (Tiller Angle from Perpendicular at the Early Jointing Stage):

a 2 1 = SPREADING (more than 60°) 2 = INTERMEDIATE 3 = ERECT (less than 30°)

3. STEMS (Full Heading):

1 1 0 CM. TALL (Soil level to tip of extended panicle on main culm)

1 0 CM. SHORTER THAN.. 5

CM. TALLER THAN..

1 = BELLE PATNA 2 = BLUEBELLE 3 = NATO 4 = STARBONNET 5 = CALROSE 6 = REXORO

1 5 NUMBER OF NODES

c 4 INTERNODE COLOR (Outside)

2 SEPTUM COLOR (Inside Node)

1 = LIGHT YELLOW 2 = CREAM 3 = GOLD 4 = GREEN 5 = REDDISH 6 = LIGHT PURPLE 7 = PURPLE 8 = DARK PURPLE 9 = OTHER (Specify) _____

2 Tillering Ability (number of culms): 1 = 10 OR LESS (Belle Patna) 2 = 11 - 20 (Bluebonnet) 3 = ABOVE 20 (Century Patna)

2 2 Strength: 1 = STURDY (Starbonnet) 2 = INTERMEDIATE (Belle Patna) 3 = WEAK

4, LEAF BLADE (First Leaf Below Flay Leaf):

3 7 CM. LENGTH 1 00 MM. WIDTH

c 2 Color: 1 = PALE GREEN (Starbonnet) 2 = MEDIUM GREEN (Bluebelle) 3 = DARK GREEN (Calrose) 4 = PURPLE 5 = RED 6 = OTHER (Specify) _____

1 Pubescence: 1 = GLABROUS 2 = INTERMEDIATE 3 = PUBESCENT

2 Flag Leaf Angle: 1 = HORIZONAL 2 = ASCENDING 3 = ERECT

2 4 CM. LENGTH OF FLAG LEAF (Booting Stage)

1 3 MM, WIDTH (widest point) OF FLAG LEAF (Booting Stage)

5. LEAF SHEATH (First Leaf Below Flag Leaf):

c 2 Ligule Length: 1 = NONE 2 = 20 MM. OR LESS 3 = 21 - 34 MM. 4 = MORE THAN 34 MM.

Color:

c 2 SHEATH (Outside) 1 COLLAR

c 2 SHEATH (Inside) c 1 LIGULE

2 SHEATH (Seedling) c 1 AURICLE

1 = COLORLESS 2 = GREEN 3 = RED 4 = PURPLE 6 = OTHER (Specify) _____

8200106

6. PANICLE:

[2] 2 Type: 1 = OPEN 2 = INTERMEDIATE 3 = COMPACT

[1] Habit: 1 = DROOPING 2 = INTERMEDIATE 3 = ERECT

[2 6] CM. LENGTH

[3] Exsertion: 1 = LESS THAN 90% 2 = 90 - 99% 3 = 100% EXSERTION

7. SPIKELET:

[1] Stigma Color: 1 = COLOR LESS (White) 2 = YELLOW 3 = PURPLE 4 = RED

8. LEMMA AND PALEA:

[0 5] Color at Maturity

[1 2] Apiculus color at maturity

[0 2] Apiculus color at anthesis

01 = TAWNY BROWN COLORLESS FURROWS (White) 02 = STRAW GREEN RED 06 = GOLD
10 = PIEBALD 11 = BLACK 12 = OTHER (Specify) Brown

[1] Pubescence: 1 = GLABROUS 2 = PUBESCENT ONLY ON LEMMA KEEL 3 = PUBESCENT

c [1] Awn: 1 = AWNLESS 2, = TERMINAL SPIKELETS AWNED 3 = AWNED AND AWNLESS 4 = ALL SPIKELETS AWNED

[0 3] MM. AWN MAXIMUM LENGTH

9. SEED:

[1] 1 Non-pigmented coat (Peticarp) ("Brown Rice" color): 1 = LIGHT 2 = MEDIUM 3 = DARKER

[ ] Pigmented coat (Peticarp): 1 -GOLD 2 = PURPLE 3 = RED 4 = BROWN 5 = SPECKLED BROWN

[1] Scent: 1 = NONSCENTED (Common) 2 = LIGHTLY SCENTED (Sadri) 3 = SCENTED (Popcorn aroma - Della)

c [1] Endosperm: 1 = NON-WAXY (common) 2 = WAXY (glutinous) c [1] Endosperm: 1 = TRANSLUCENT, FEW CHALKY SPOTS 2 -CHALKY GERMTIP 3 = WHITE BELLY 4 = LARGE CHALKY cORE 5 = OPAQUE

[2] Shattering (Threshability): 1 = DIFFICULT THRESHING (Conway) 2 = THRESHES READILY 3 = SHATTERS

[1] Dormancy: 1 = LOW (0 days) 2 = MEDIUM (30 days) 3 = HIGH (90 days or more)

10. GRAIN:

a [3] Paddy shape (length/width Ratio): 1 = SHORT (less than 2.2:1) 2 = MEDIUM (2.2:1 to 3.4:1) 3 = LONG (greater than 3.4:1)

MEASUREMENTS:

Grain Form	Length (mm.)	Width (mm.)	Thickness (mm.)	L/W Ratio	1000 Grains (Grams)
Paddy	092	26	19	35	252
Brown	073	22	17	33	205
Milled	068	21	17	31	178

MILLING QUALITY

[2 1] % HULLS

[6 9] % TOTAL MILLED RICE

11. RESISTANCE TO LOW TEMPERATURE:

[3] Germination & Seedling vigor: 1 = LOW (Bluebelle) 2 = MEDIUM (Nato) 3 = HIGH (Caloro)

8/31/82 JJ-87

3 [2] Flowering (Spikelet fertility): 1 = LOW (Bluebelle) 2 = MEDIUM (Caloro) 3 = HIGH (Calrose)

12. RESISTANCE TO:

[ ] Salinity: 1 = LOW (Bluebonnet) 2 = MEDIUM (Blue Rose) 3 = HIGH

[ ] Alkalinity: 1 = LOW (Bluebelle) 2 = MEDIUM (Dawn) 3 = HIGH (Arkrose)

13 RESWNSE TO PHOTOPERIOD:

c [1] 1 = NON-SENSITIVE (Belle Patna) 2 = WEAKLY SENSITIVE (Blue Rose) 3 = STRONGLY SENSITIVE (Caloro)

12

8200106

FORM GR-470-17 (Page 3 of 3 pages)

14. PYRICULARIA ORYZAE RESISTANCE **(International** races found **under** Reference& items 2 and 4 below.)
(0 = Not Tested; 1 **=** Susceptible; 2 = Resistant):

GROUP	IA	IB	IC	ID	IE	IG	IH				
NUMBER	109	1 33 49 54	1 17 19	1 8 13 14	1 3	1 2	1				
RESISTANCE											

15. DISEASE RESISTANCE **(0** = Not **Tested;** 1 = **Susceptible;** 2 = **Resistant):**

[0] **CERCOSPORA** ORYZAE	c [0] ENTY **LOMA** ORYZAE	a [0] FUSARIUM PANICLE BLIGHT
[ ] **HELMINTHOSPORIUM** ORYZAE	c [0] HOJA BLANCA VIRUS	c [0] **LEPTOSPHAERIA SALVINII**
c [0] **PYTHIUM** SEEDLING BLIGHT	c [0] **RHIZOCTONIA** ORYZAE	[0] STRAIGHTENED
[0] TI **LLETIA** BARCLAYANA	[0] WHITE TIP NEMATODE	[0] OTHER (Specify) _____

16. INSECT RESISTANCE (0 = Not Tested; 1 = **Susceptible;** 2 = Resistant)

[0] GRASS HOPPER	[0] LEAF HOPPER	a [0] RICE **HISPA**
[0] RICE MIDGE	[0] STEM BORER	[0] STINK BUG
c [0] SWARM CATERPILLAR	[0] WATER WEEVIL	[0] OTHER **(Specify)** _____

17. INDICATE A VARIETY WHICH MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Tillering		**Seed** Shape	**Blue Belle**
Lodging		Endospatm **Transp,**	
Leaf Angle		**Milling** Quality	
Leaf **Color**		Cook **& Proc.** Quality	

18. GIVE THE FOLLOWING AVERAGE DATA FOR SUBMITTED AND A SIMILAR VARIETY

VARIETY	PARBOIL CANNING STABILITY (% Loss)	PROTEIN • (%)	AMYLOSE • ' (%)	ALKALI REACTION • ** 1.7	2.0	GELATINIZATION TEMPERATURE (°C)
SUBMITTED			22.7	5.0		Intermediate
SIMILAR						
NAME OF SIMILAR VARIETY						

***Hulled Rice** - Dry Wt. ****Milled Rice 11 - 12% Moisture ***Average spreading value in 1.7% and 2.0% KOH Solution.**

REFERENCES

1. C. R. Adair et al, 1972. Rice in the United States: Varieties and Production. USDA Handbook No. 289 (Rev.), 124 pp.
2. J. G. Atkins, et al, 1967. An International Set of Rice Varieties for Differentiating Race of Pyricularia Oryzae. Phytopath. 57:297-301.
3. Te-Tzu Chang, 1965. The Morphology and Varietal Characteristics of the Rice Plant. IRRI Los Banos, Philippines Tech. Bullerin 4.
4. K. C. Ling and S. H. Ou, 1969. Standardization of the International Race Numbers of Pyricularia Oryzae. Phytopath. 59:339-342.
5. B. D. Webb et al, 1968. Characteristics of Rice Varieties in the USDA Collection. Crop Sci 8:361-365.
6. Nickerson's or any recognized color fan may ,be used to determine plant colors of the described variety.

COMMENTS:

In California at this'time there are no disease problems in rice with the exception of stemrot, and at present there is no rice variety in California resistant to this disease.